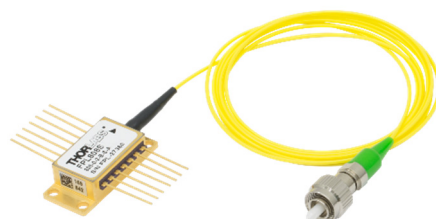


808 nm Fabry-Perot Laser Diode, 250 mW, Single Mode Fiber

FPL808S



Description

The FPL808S is an 808 nm Fabry-Perot laser diode based on quantum well epitaxial layer growth and a highly reliable ridge waveguide structure. This diode features high optical output power and slope efficiency. The laser diode is housed in a butterfly package with an integrated monitor photodiode, TEC, and a thermistor that allows the laser to be temperature controlled. The output is coupled to 1.0 m of FC/APC-terminated 780HP single mode fiber.

Specifications

Absolute Maximum Ratings	
LD Reverse Voltage	2.0 V
PD Reverse Voltage	20 V
Current ^a	750 mA
Power	260 mW
Operating Case Temperature	0 to 60 °C
Storage Temperature	-10 to 70 °C
Pin Code	14 pin, Type 1



- a. Due to variations between each lot of laser diodes, some devices will produce an output power higher than the 260 mW max when driven with a 750 mA current. Do not drive the laser diode with a current that will cause the output power to exceed the specified maximum power rating. Operating in this regime can cause damage to the device.

Specifications ^b				
	Symbol	Min	Typical	Max
Center Wavelength	λ_c	798 nm	808 nm	818 nm
Spectral Bandwidth (RMS)	$\Delta\lambda$	-	0.5 nm	3.0 nm
Output Power CW @ I_{CW}	P_{CW}	230 mW	250 mW	260 mW
Operating Current CW ^b	I_{CW}	-	700 mA	750 mA
Threshold Current	I_{TH}	-	200 mA	275 mA
Forward Voltage	V_F	-	2.3 V	3.0 V
Slope Efficiency	$\Delta P / \Delta I$		0.5 W/A	-
Monitor Photodiode Current	I_{photo}	-	0.8 mA	-
TEC Operation (Typical/Max @ $T_{CASE} = 25\text{ °C}/60\text{ °C}$)				
TEC Current	I_{TEC}	-	0.5 A	2.5 A
TEC Voltage	V_{TEC}	-	0.5 V	3.2 V
Thermistor Resistance	R_{TH}	-	10 k Ω	-

b. CW; $T_{CHIP} = 25\text{ °C}$, $T_{CASE} = 0 - 60\text{ °C}$

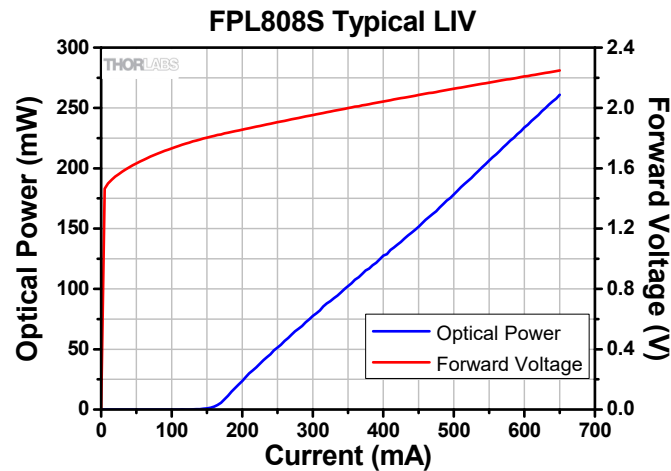
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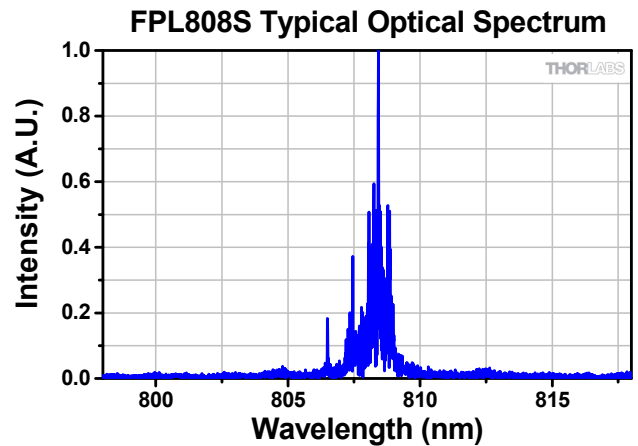
Fiber Specifications

Fiber Type	780HP
Numerical Aperture	0.13
Core Diameter	4.4 μm
Fiber Length	1.0 m
Connector	FC/APC, 2.0 mm Narrow Key

Typical Performance Plots

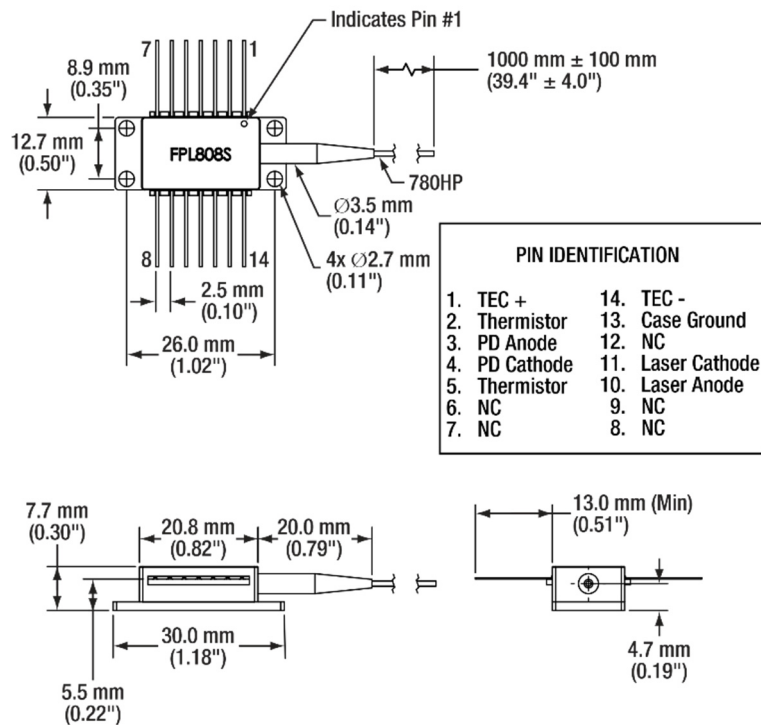


The device was held at 25 °C.



While the laser diode was held at 25 °C, it was driven at the current required to reach an output power of 250 mW.

Drawings



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